1.

CTEH®

THE SCIENCE OF READY℠

ITC Tank Fire

Deer Park, TX

Analytical Air Sampling Plan

Version 1.2

Prepared on Behalf of:

Intercontinental Terminals Company

Prepared By:

CTEH, LLC

5120 Northshore Drive

North Little Rock, AR 72118

501-801-8500

April 22, 2019

	Name/Organization	Signature	Date Signed
Prepared by:	Mike Berg, Ph.D., CIH, CSP		4/22/2019
Submitted by:			
Approved by:			
Approved by:			
Approved by:			
Approved by:			

90004899

1. Introduction

This Analytical Air Sampling Plan was prepared by CTEH, LLC. (CTEH®) to identify criteria to apply to the collected data to demonstrate that a reduction in ambient analytical air sampling efforts is appropriate for the Second 80's Tank Fire Response. To date, the Unified Command-approved Air Sampling and Analysis Plan has been utilized for the following functions:

- Monitor the air within the residential areas (e.g., community) around the ITC facility;
- Monitor the air within the industrial areas and within specific facilities surrounding the incident site;
- Monitoring the air within each operational division (A-E) to include both land- and water-based operations;
- Sample the air within the residential and industrial areas around the ITC facility and response-related clean-up operations;
- Sample the air within the breathing zone of response-associated workers; and
- Sample the air at stationary sampling locations using appropriate USEPA methodology.

Ambient air monitoring for this response was initiated on March 17, 2019, shortly after the Second 80's Tank Fire incident. Analytical air sampling was initiated on March 18, 2019, at four locations. A significant increase in the number of analytical sampling stations occurred on March 21, 2019. A map identifying the locations of all of the analytical air sampling stations to-date on this response is provided in **Appendix A**[1]. The following section identifies the rationale and provides the criteria recommended for a reduction in analytical air sampling efforts.

2. Air Sampling Adjustment Criteria

Currently, 34 ambient analytical air sampling stations remain in operation. At each of these sampling stations, an ambient air sample is collected using an evacuated canister over a 24-hour time period. These samples are being sent to a third-party analytical laboratory for analysis of volatile organic compounds (VOCs) following USEPA Method TO-15, which include benzene and 1,3-butadiene.

At the request of the Operations Section, this work plan outlines these criteria to be evaluated to determine that a reduction or elimination of current analytical air sampling efforts would be appropriate. The criteria proposed to support this reduction are:

- The sampling station has been in operation for at least fourteen days;
- Analytical results for the last 14 days' worth of data has been reported by the laboratory for that station;
- Review of the analytical data indicates that last seven days' worth of data for the station below the TCEQ 24-hr Air Monitoring Comparison Values (AMCV) for benzene (0.100 ppm) and 1,3-butadiene (0.430 ppm).
- Review of the analytical data indicate that the last 14 days' worth of data, when averaged, are below the ATSDR Inhalational Minimal Risk Levels (MRL) for benzene, toluene, ethylbenzene, and xylene.

[1] Note that analytical sampling station MC035 – MC038 were initiated in response to an off-site event not associated with the Second 80's Tank Fire on March 26, 2019. These stations were demobilized on March 27, 2019.

As defined by the ATSDR, the MRLs are "*intended to serve as a screening tool to help public professionals decide where to look more closely. They may also be used as a mechanism to identify those hazardous waste sites that are not expected to cause adverse health effects."* Due to the potential duration of this event, it is recommended that, when available, the intermediate MRLs are utilized as these values encompass a potential exposure duration of 15 to 365 days. Intermediate exposure duration values are available for benzene (0.006 ppm), ethylbenzene (2 ppm), and xylene (0.6 ppm). In the absence of an intermediate value for toluene, a chronic inhalation MRL (1 ppm) will be utilized to screen the results.

3. Continued Analytical Sampling

For the purposes of this plan, a sampling station may be suitable for demobilization when the above criteria are met. While all sampling stations have already met the criteria described in this plan[2], CTEH intends to continue air sampling at additional stations to be distributed within a 2.5-mile radius surrounding the ITC impacted tank farm during remediation and tank clean-up operations. Analytical stations will be established to capture emissions in the work site, downwind locations, and residential areas in proximity to the ITC tank farm out of an abundance of caution. Specifically, proposed analytical stations will be placed directly south and southeast of the tank farm, near the San Jacinto Battleground SHS to the northeast, northwest of the ship channel near Jacinto Port, and directly north near Channelview (**Appendix A**). Similarly, if operations or weather conditions change, other stations may be maintained or redeployed in a discretionary fashion. Proposed analytical stations will remain active or scaled back by 0.5 mile increments until demobilization is approved by Unified Command.

This plan is only directed at adjusting air sampling in the community. CTEH will continue real-time air monitoring around the worksite and within residential areas and maintain sufficient resources on-site to rapidly re-establish analytical air sampling stations at these locations should conditions change. Should CTEH observe detections of benzene above the TCEQ Short-Term AMCV (0.180 ppm) in the community, analytical air sampling stations will be redeployed in that location. Specifically, if the average of at least three benzene detections at the same location is above 0.18 ppm within a 4-hour period and an off-site source for the benzene detections cannot be identified, analytical stations nearest that location in the community will be redeployed. Analytical sampling stations in the affected community will be reestablished within 24 hours of detections with a 4-hour average above the TCEQ Short-Term AMCV of 0.18 ppm.

[2] Refer to CTEH Analytical Data Summary submitted through UC.

Attachment A

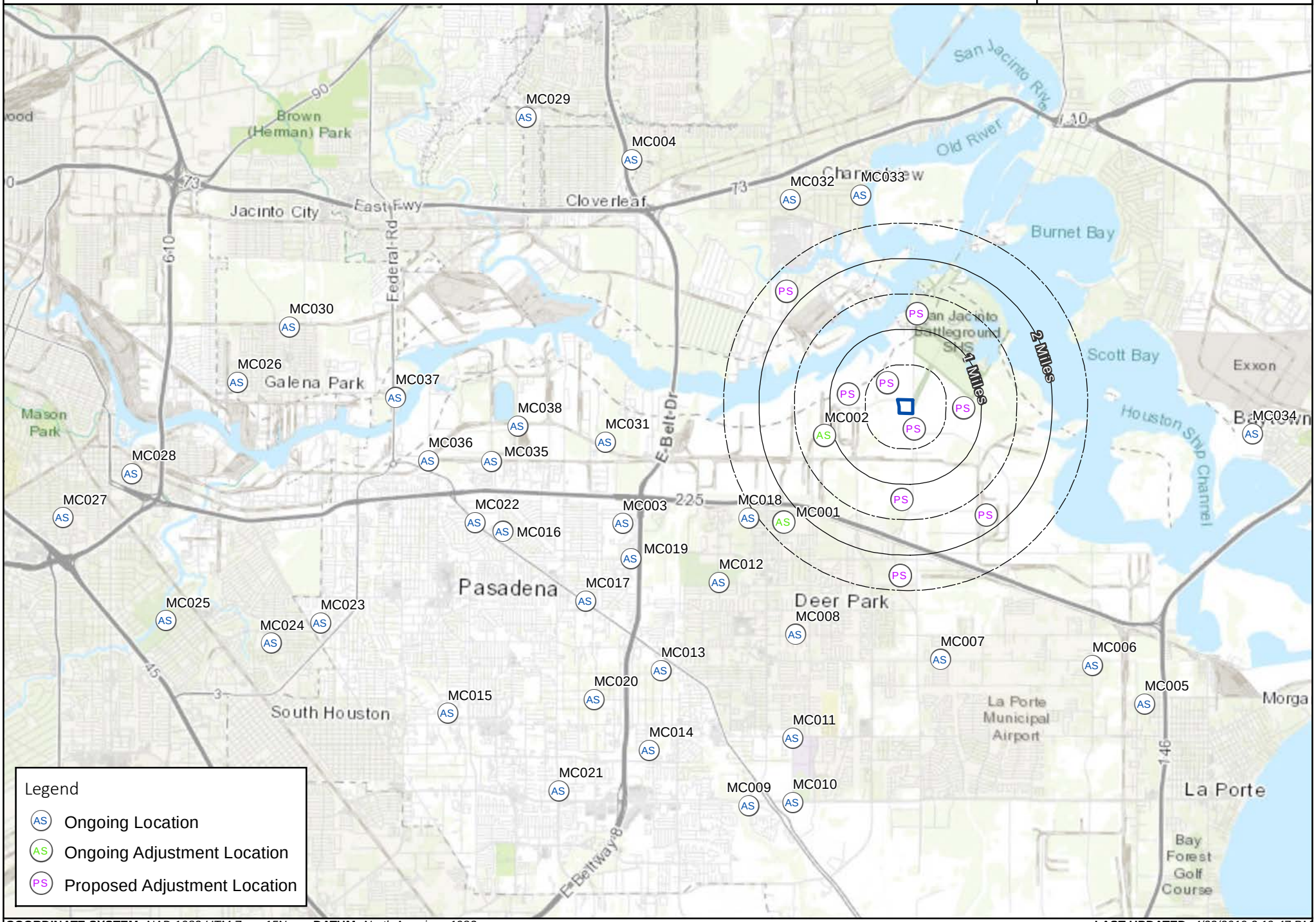
CTEH Community Air Sampling Locations

Air Sampling Station Station Distance

Second 80's Tank Fire

0 1 2 4 Miles

Project: 111356
Client: ITC
City: Pasadena, TX
County: Harris



COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *4/23/2019 2:19:47 PM*